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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,295	07/30/2001	Eric P. Traut	068167.0108	9879

7590 07/09/2004

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EXAMINER	1
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WONG, LESLIE

ART UNIT	PAPER NUMBER
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2177

DATE MAILED: 07/09/2004

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,295

Applicant(s)

TRAUT ET AL.

Examiner

Leslie Wong

Art Unit

2177

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Receipt of Applicant's Amendment, filed 22 April 2004, is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 4, 8, 11, 14, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Yu, US Patent No. 5,764,903.

As to claim 1, 4, Yu discloses the claimed invention including a virtual hard drive for emulating a computer system running on a host computer system (col. 2, lines 9-15 et seq.) In particular, Yu teaches a hard drive containing a first file (col. 3, lines 43-46 et seq.) Yu also teaches a second file on the hard drive, wherein said second file is stored on a different partition of the hard drive (differencing drive) (col. 3, lines 22-24) wherein write operations directed to said partition are forwarded to a virtual hard drive thereby expanding the size of the hard drive to accommodate the content of the write operation (col. 4, lines 45-50 et seq.)

As to claims 8 and 11, Yu discloses the claimed invention as discussed in the preceding paragraph. In addition, Yu teaches that the virtual drive appears as the hard drive of the emulated computer system (col. 5, lines 25-35 et seq.)

4. The limitations of claims 14-15, 19-20 have already been addressed in the rejection of claims 1, 4, 8, and 11 above. They are therefore rejected on similar grounds.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2-3, 5-7, 9-10, 12-13, 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yu as applied to claims 1, 4, 11, and 14 above in view of Day, III et al. ("Day"), Us Patent 6,185,580.

As to claims 2-3, 5-7, 9-10, 12-13, 16-18, Yu does not particularly teach that the hard drive is a fixed hard drive, which is dynamically expandable. Day, however, teaches an analogous system wherein the size of a hard drive is dynamically expandable through the use of a virtual disk (col. 2, lines 3-17 et seq.) It would have been obvious to one of ordinary in the art of data processing to combine the teachings of the cited references. Day's teachings would allow users of Yu's system to increase the size of their hard drive to thereby enable said hard drive to a greater range of data.

Response to Argument

7. Applicant's arguments filed 22 April 2004 have been fully considered but they are not persuasive.

Applicants argue that Yu does not teach a virtual disk drive of an emulated computer system and that the virtual hard drive cited by the Examiner is the virtual storage device provided for an emulated computer system (i.e., virtual machine). In response to the preceding arguments, Examiner respectfully submits that Yu teaches a virtual disk drive of an emulated computer system as when the applications such as

word processors, database managers, language compilers, and the like are running on the client computer systems (i.e., personal computer col. 4, lines 2-5), the applications would communicate with **software (i.e., emulator program) on the primary server** through a network interface. If the operating system receives a call to write data to the partition that is being mirrored, the disk write request is sent to a virtual disk driver. The virtual disk driver then initiates the disk write request to the local hard disk on the primary server by sending the disk write request to hard drive device driver (col. 4, lines 45-65). Additionally, Yu teaches the primary and secondary servers operate under the SCO UNIX operating system and the clients are personal computers (col. 2, lines 50-60 and col. 4, lines 2-5). Examiner submits the emulator program mentioned above enables the communication between two different systems: "UNIX vs. PC". Thus, Yu teaches a virtual hard drive that emulates a computer system limitation as claimed.

Further, Applicants argue that Yu and Day, separately or in combination, teach or suggest a virtual disk drive of an emulated computer system as claimed. In response to the preceding arguments, Examiner respectfully submits that Yu alone teaches the virtual hard drive that emulates a computer system limitation as indicated above. Hence, Yu's teaching satisfies the limitation as claimed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie Wong whose telephone number is (703) 305-3018. The examiner can normally be reached on Monday to Friday 9:30am - 6:30 pm.

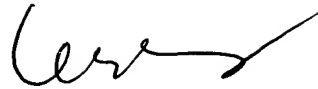
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703) 305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Leslie Wong
Patent Examiner
Art Unit 2177

LW
July 8, 2004



JEAN R. HOMERE
PRIMARY EXAMINER